

PTO/SB/21 (09-04)

Approved for use through 07/31/2008. OMB 0681-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid OMB control number.

**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

5

Application Number

10/719,562

Filing Date

11/20/2003

RECEIVED

First Named Inventor

Ledden

CENTRAL FAX CENTER

Art Unit

2859

Examiner Name

Louis M. Arana JUN 09 2005

Attorney Docket Number

NOVAM40531

**ENCLOSURES (Check all that apply)**

Fee Transmittal Form



Fee Attached



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)

Reply to Missing Parts/  
Incomplete ApplicationReply to Missing Parts  
under 37 CFR 1.62 or 1.63

Drawing(s)



Licensing-related Papers



Petition

Petition to Convert to a  
Provisional Application

Power of Attorney, Revocation



Change of Correspondence Address



Terminal Disclaimer



Request for Refund



CD, Number of CD(s)

Landscape Table on CD

Remarks



After Allowance Communication to TC

Appeal Communication to Board  
of Appeals and InterferencesAppeal Communication to TC  
(Appeal Notice, Brief, Reply Brief)

Proprietary Information



Status Letter

Other Enclosure(s) (please identify  
below):**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name

Altman &amp; Martin

Signature



Printed name

Steven K. Martin

Date

06/09/2005

Reg. No.

38,542

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below: 703-872-9306

Signature



Typed or printed name

Steven K. Martin

Date

06/09/2005

This collection of information is required by 37 CFR 1.6. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9198 and select option 2.

RECEIVED  
CENTRAL FAX CENTER

JUN 09 2005

Attorney Docket: NOVAM40531

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Ledden  
Application No.: 10/719,562                      Group Art Unit: 2859  
Filing Date: November 20, 2003              Examiner: Louis M. Arana  
Title: Methods for Transmit Excitation in Magnetic Resonance Imaging  
Using a Transmit Pulse with Time Varying Spatial Characteristics  
  
Boston, Massachusetts  
Date: June 9, 2005

---

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**RESPONSE**

In response to the Office Action dated December 13, 2004.

Claims 1-11 stand rejected under 35 U.S.C. § 102(b).

Claims 1-11 remain in this application.

**Argument**

**The § 102(b) Rejection**

Claims 1-11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Glover et al. The Examiner indicates that Glover discloses the use of a composite pulse for time reversal in MRI.

Glover discloses a traditional NMR system where sequences of transmit pulses generate RF transmit fields for spin excitation. The pulses can generate fields of differing amplitude and/or phase, but the spatial characteristics of the field do not change. In other words, if the phase or amplitude of the transmit field is changed, that change occurs uniformly over the entire transmit field. For example, if the amplitude and phase of two points in the transmit field are the same at a given time, they will always be the same.

Claims 1 and 10 of the present application require that the transmit system be capable of generating transmit fields with differing spatial characteristics. For example, if the amplitude and phase of two points in the transmit field are the same at a given time, they may be different at any other time.